STAFF REPORT NO. 129-15

TO: Mayor and City Council
FROM: Eric Holmes, City Manager

DATE: 9/14/2015

Subject: Water Use Efficiency Goals

Key Points:
- The Municipal Water Law requires water utilities to establish new or reestablish existing Water Use Efficiency Goals every six years.
- City Council adopted Water Use Efficiency goals in 2009.
- Past Water Use Efficiency goals have helped to achieve an 18% decrease in water consumption per single family residence from 252 gallons per day per residence in 2003 to 207 gallons per day per residence in 2012.
- Water Use Efficiency will help offset future source development and capital expenditures.

Objective: Enhance the efficient use of water supplied by Vancouver’s municipal water system through adoption of Water Use Efficiency Goals, as directed by the Washington State Department of Health.

Present Situation: The Washington State Department of Health developed Water Use Efficiency requirements (Washington Administrative Code (WAC) 246-290), pursuant to passage of the Municipal Water Law in 2003. Per these requirements, municipal water providers are required to develop and implement a Water Use Efficiency program that establishes goals to enhance the efficient use of water, with opportunity for public information and comment. Goals must be presented in a public forum with an opportunity for public input and shall be adopted every six (6) years by the elected governing body of the water system (WAC 246-290-830). Water Use Efficiency goals were last approved by City Council in 2009. The proposed goals are consistent with the previously adopted 2009 goals.

As directed by state requirements, the proposed City of Vancouver Water Use Efficiency Goals were drafted and presented to Council in a workshop on August 10, 2015. The public was then provided the opportunities to comment in a public forum. The proposed goals are:

1) Supply-Side Goal: Maintain annual distribution system leakage (DSL) to six (6) percent or less. This goal is consistent with the previously established 2009 Water Use Efficiency goals. Distribution system leakage has averaged 7.6% over the last 4 years. The City continues to look for methods of further reducing distribution system leakage. The City implements the following supply-side measures to meet its supply-side goal:
   - Record and monitor supply source production.
   - Test and re-calibrate supply well metering.
   - Record and monitor customer demands through customer water meters.
   - Replace water meters exceeding two million gallons of use.
   - Record end-line flushing and main or service line leaks.
   - Work with the Vancouver Fire Department and Fire District 5 to measure water used in
training exercises, hydrant testing, and fire fighting.

- Record backwash water discharged from water treatment facilities.
- Replace deteriorating water mains.
- Pursue cases of water theft without appropriate meter and connection, using newly adopted penalties.
- Reclaimed Water: the City implemented a reclaimed water system at its Westside and Marine Park Water Reclamation Facilities. Reclaimed water is used for irrigation during the summer, seal water for pumps, sprays for surface control of floating foam and solids, and washing and cleaning of basins. At the Westside Water Reclamation Facility, reused water is also used for the air pollution equipment. The Ellsworth Water Treatment Plant recycles backwash water by settling out solids and pumping the remaining water into treatment filters.
- Perform regular leak studies of the distribution system piping and repair leaks.

2) **Demand-Side Goal:** Reduce the average equivalent residential unit annual water consumption by one (1) percent per six years, to achieve 200 gpd/Equivalent Residential Unit (ERU). This goal is consistent with the previously established 2009 Water Use Efficiency goals, but in addition sets a cap at 200 gpd/ERU. Currently, the City highlights the needs and benefits of residential water use efficiency through bill inserts and on the City website. Water use efficiency is also a key element of Water Resource Education Center activities. Water Center displays and community outreach and education are key to the success of the water use efficiency program. The City will continue to utilize opportunities for education, outreach and promotion to encourage water use efficiency. The following measures are implemented by the City to meet its demand-side goal:

- Promote efficient water use by including a volumetric charge in its water rates.
- Include comparisons of current and past water consumption on customer’s utility bills.
- Promote water use efficiency through billing inserts.
- Alert customers who show a significant water increase to the potential of leaks at their service.
- Assist customers in identifying the location of water leaks beyond the water meter.
- Promote WUE and provide tips on the City website.
- Establish efficient water use through City standards for landscaping (VMC 7592 20.925.100).
- Present on water issues to neighborhood associations and other interested groups.
- Maintain WUE exhibits at the Center. The Center had a total of 5,240 walk-in visitors in 2014. An additional 9,624 visitors attended events booked in the Bruce E. Hagensen Community Room.
- Maintain a demonstration garden promoting native and low-water use plants.
- Host school group visits at the center. During 2014, the Center hosted 41 classroom visits serving a total of 1,772 students plus their teachers and chaperones.
- Promote WUE at school science fairs and local festivals.
- Lead the Student Watershed Monitoring Network. This water quality monitoring program served 2,626 students from 21 schools and was supported by 53 teachers during the 2014/2015 school year.

Coordinate regular teacher workshops and multi-day camps for K-12 teachers to provide curricula and activities focused on water.

Partnerships & Joint Activities:
   a. EPA Water Sense
   b. “Food and Film Series” (Vancouver Watersheds Alliance (VWA))
   c. Columbia Springs Environmental Education and Outreach Program
   d. Xeriscaping Workshops for Landscape Professionals (Clark County Department of Environmental Services and Washington State University Clark County Extension

Advantage(s):
1. Achievement of these goals will help offset the need for future source development and reduce capital expenditures.
2. Water use efficiency is essential to creating a more sustainable community and continuing to ensure an ample water supply for generations to come.
3. Adoption of these goals will meet the requirement of the Municipal Water Law and Washington State Department of Health.

Disadvantage(s): None.

Budget Impact: None

Prior Council Review: Water Use Efficiency Goals were discussed during the Comprehensive Water System Plan Workshop held on August 10, 2015.

Action Requested: On September 14, 2015, adopt a resolution establishing Water Use Efficiency goals for the City of Vancouver Water Utility.
RESOLUTION NO. ______

A RESOLUTION related to the Washington State Department of Health Water Use Efficiency requirements (Washington Administrative Code WAC 246-290), which mandate that municipal water suppliers shall develop and implement a Water Use Efficiency program that establishes goals to enhance the efficient use of water, with opportunity for public information and comment. Such goals must be presented in a public forum with an opportunity for input and shall be reestablished every six (6) years by the elected governing body of the water system (WAC 246-290-830).

WHEREAS, as directed by state requirements, water use efficiency goals (previously referred to as water conservation goals) were adopted by the City of Vancouver in 2009; and

WHEREAS, WAC 246-290-830 requires the reestablishment of water use efficiency goals every six years; and

WHEREAS, as directed by state requirements, draft City of Vancouver Water Use Efficiency Goals were proposed, published, and made available for public comment through the City’s web site, in hard copy form at the City’s Marine Park Engineering Services building and at a public meeting on August 10th, 2015, at City Hall; and

WHEREAS, with water use efficiency strategies developed, public input received, and all comments taken into consideration, the following City of Vancouver Water Use Efficiency Goals are recommended to achieve Washington State Water Use Efficiency requirements:
• **Supply-Side Goal:** Maintain annual distribution system leakage (DSL) to six (6) percent or less.

• **Demand-Side Goal:** Reduce the average equivalent residential unit annual water consumption by one (1) percent per six years, to achieve 200 gpd/ERU.

NOW, THEREFORE,

BE IT RESOLVED BY THE CITY OF VANCOUVER

Section 1. That the aforementioned water use efficiency goals be adopted.

ADOPTED at regular session of the Council of the City of Vancouver, this __________ day of ______________________, 2015.

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Timothy D. Leavitt, Mayor

Attest: Approved as to form:

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Lloyd Tyler, City Clerk
By: Carrie Lewellen, Deputy City Clerk

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E. Bronson Potter, City Attorney

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